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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,586	01/16/2001	Hideyuki Motoyama	FUJH 18.241	4300

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EXAMINER
BATES, KEVIN T

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *17 December 2004*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,2,8-14,16 and 17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,2,8-14,16 and 17* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage

        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Response to Amendment

This Office Action is in response to a communication made on December 17,

2004.

Claims 1-2, 5-14, and 16-17 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 11, and 17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lu (5412652) in view of Takisyasu (5103447).

Regarding claims 1 and 17, Lu discloses <u>a SONET/SDH transmission</u> device for

<u>connected at a node of a synchronous network of a ring configuration</u> controlling inter-

communication between a plurality of LAN segments (Column 4, lines 31 – 40)

comprising: <u>a LAN interface including,</u> a LAN interface accommodation <u>portion</u> for

accommodating LAN segments (Column 6, lines 48 – 55), a traffic monitor for

monitoring traffic of LAN data <u>which is transmitted from a node to another node of the</u>

<u>synchronous network (Column 6, lines 11 – 12),</u> a communication <u>controller (Column 7,</u>

<u>lines 15 – 29),</u> path <u>selector</u> for switching a communication path according to an

instruction from the traffic <u>monitor,</u> and a packet switch controller for switching the

packeted LAN data (Column 10, lines 6 – 16), <u>a multiplex/demultiplex part for</u>

<u>multiplexing/demultiplexing the packeted LAN data from the LAN interface to a payload</u>

of a data frame in a logical path between a high speed SONET/SDH interface and a low

speed SONET/SDH interface; and a SONET/SDH interface connected to the

multiplex/demultiplex part having a high speed interfacing function for connecting

SONET/SDH transmission devices (Column 4, lines 35 – 40; Column 6, line 64 –

Column 7, line 3), but Lu does not explicitly indicate that the controller forms a packet of

the LAN data by adding an overhead which indicates node number of a transmission

source and a transmission destination to inter-connect the LAN segments of a node and

a LAN segment of another node via the synchronous network. Takiyasu teaches a

SONET ring network (Column 2, lines 14 – 17; lines 58 – 63) that discloses the

controller forms a packet of the LAN data by adding an overhead which indicates node

number of a transmission source and a transmission destination to inter-connect the

LAN segments of a node and a LAN segment of another node via the synchronous

network (Column 5, lines 16 – 19). It would have been obvious to one of ordinary skill in

the art at the time the invention was made to use Takiyasu's teaching about overhead in

a SONET network in Lu's system in order to have the SONET frame to contain all the

information in the overhead that a network node will need to route the SONET frame

(Column 4, lines 42 – 62).

Regarding claim 11, Lu discloses wherein said inter-LAN communication device

further comprises: an interface which is common with the LAN segment to be

connected, traffic status monitor of LAN data from said LAN segment (Column 6, lines

11 – 12), an address learning part which learns and stores data generated in one LAN

segment based on said traffic status and routing information added to the LAN data

from another LAN segment when the data is transferred to the other LAN (Column 4,

lines 40 – 45) and a packet switch controller for inter-connecting one LAN segment and

the other LAN segment based on said learned and stored information (Column 10, lines

6 – 16).

Regarding claim 8, the combination of Lu and Takiyasu discloses that said

packet switch control means further includes an address learning part, which learns

information where the transmission source and transmission detection node number

information which is added to a packet sent from another LAN segment (Takiyasu,

Column 5, lines 16 – 19), the transmission source and transmission destination address

information which the LAN data has, and the communication port information which the

packet switch control means has, are associated and stores said association

information (Lu, Column 4, lines 40 – 45).

Regarding claim 9, the combination of Lu and Takiyasu discloses node numbers

of the overhead to indicate the transmission source and the transmission destination in

said communication control means, a local node number which is preset, is added as

the transmission source node number and the node number which is derived by

searching and referring to said learned and stored association information on the node

numbers, communication ports and addresses based on the transmission destination

addresses which the LAN data bus has, is added as the transmission destination node

number (Lu, Figure 6, node A, B, C, and D; and channels).

Regarding claim 10, the combination of Lu and Takiyasu discloses that said

packet switch control means compares the local number, which is preset, and the

transmission destination node number of a packet sent from another node, which is

another LAN segment, based on said learned and stored association information of the

node numbers, ports and addresses, and the transmission destination packet is

received by the local node if the transmission destination node number is the same as

the local node number, and a communication port is selected and the packet is

transferred if the transmission destination node number is another node number (Lu,

Figure 6, node A, B, C, and D; and channels; Column 9, lines 5 – 44).

Claims 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu

in view of Takiyasu as applied to claims 1, 8, 11, and 17 above, and further in view

of Takase (5809012).

Regarding claim 2, the combination of Lu and Takiyasu does not explicitly

indicate that said communication control means further includes a buffer which stores

data transmitted from the LAN segment, and said traffic monitoring means monitors

traffic by monitoring the capacity of said buffer which stores data transmitted from the

LAN segment. Takase discloses a ring configuration for a LAN segment network

(Column 6, lines 33 – 36) which includes said communication control means further

includes a buffer which stores data transmitted from the LAN segment, and said traffic

monitoring means monitors traffic by monitoring the capacity of said buffer which stores

data transmitted from the LAN segment (Abstract, lines 4 – 17). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to use

Takase's teaching in Lu's system in order to prevent any buffer from becoming

congested and being forced to drop packets (Column 9, lines 42 – 53).

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in view of Takiyasu as applied to claims 1, 8-11, and 17 above, and further in view of Bucholz (5337313).

Regarding claim 5, the combination of Lu and Takiyasu does not explicitly indicate that said communication control means adds a sequence number for each packet at the transmission side so as to prevent a mismatch of the arrival sequence when the communication path is different for each packet due to path switching. Buchholz teaches a method of identifying a series of packets, which are being transmitted as a data stream and in order to keep that data stream in the correct order, generates packet sequence information in order to allow the destination device to know the correct order of the packets in a data stream (Column 3, lines 36 – 53). It would have been obvious to one of ordinary skill at the time the invention was made to use Buchholz's teaching of adding sequence information to a series of packets in Lu's Inter-Lan segment device in order to ensure that the packets sequence can be determined even if path switching alters their order in reception (Column 2, lines 10 – 21; Column 3, lines 48 – 53).

Regarding claim 6, the combination of Lu and Buchholz teaches said path control means adds a sequence number for each packet after said added node number at the transmission side so as to prevent a mismatch of the arrival sequence when the communication path is different for each packet due to path switching (Buchholz, Column 3, lines 36 – 53).

Regarding claim 7, the combination of Lu and Buchholz teaches said path control

means matches the phases of packets by referring to said sequence numbers and

deleting said sequence numbers of the added information at the receiving side

(Buchholz, Abstract, lines 15 – 24; when the packet is received the header is removed

and the payload is used at the received node).

Claims 12-14 and 16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lu in view of Takiyasu as applied to claims 1, 8-11, and 17

above, and further in view of Beshai (6404735).

Regarding claim 12, Lu discloses said packet switch control means in the inter-

LAN communication device installed in each one of the plurality of nodes of said

network further comprises two communication ports, and that the network can be in a

ring format (Column 4, lines 31 – 40), but does not explicitly indicate band sharing type

inter communication between the plurality of LAN segments is implemented by the

cascade connection of the band (path). Beshai discloses a plurality of nodes with inter

node network segments that uses band sharing connections (Column 5, lines 1 – 6;

lines 36 – 42). It would have been obvious to one of ordinary skill in the art at the time

the invention was made to use Beshai's teachings of band sharing in Lu's network in

order to allow an the network to implement multiple classes of packets including voice

communication (Column 5, lines 17 – 35).

Regarding claim 13, the combination of Lu and Beshai discloses that said packet

switch control means sets a fixed band path of a Point-to-Point connection between

specified nodes, so as to guarantee a minimum access band between said nodes

(Beshai, Column 8, lines 3 – 26), and the band sharing path is used as a bypass route when traffic exceeds the band of said fixed band (Beshai, Column 5, lines 39 – 42).

Regarding claim 14, the combination of Lu and Beshai discloses that said packet switch control means always transmits the packeted LAN data for transmission to the band sharing path when only the band sharing type path is used (Beshai, Column 3, lines 52 – 67).

Regarding claim 16, the combination of Lu and Beshai discloses that said path control means normally sends the packeted LAN data for transmission to said fixed band path when the minimum access band guarantee type is used, and dynamically switches traffic to the band sharing path when said means of monitoring traffic notifies a band overflow of said fixed band path (Beshai, Column 3, lines 52 – 67; Column 5, lines 39 – 42).

Response to Arguments

Applicant's arguments with respect to claims 1-2, 8-14, and 16-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (571) 272-3980. The examiner can normally be reached on 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KB

KB
April 14, 2005

BHARAT BAROT
PRIMARY EXAMINER